

Emergent Gameplay: The Limits of Ludology and Narratology in Analyzing Video Game
Narrative

A Senior Honors Thesis

Presented in Partial Fulfillment of the Requirements for graduation with distinction in
English in the undergraduate colleges of The Ohio State University

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December 2005

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Introduction

Ever since the 1976 release of *Death Race*, an arcade game that let gamers run over stick people, there have been plenty of politicians, media outlets and watchdog groups monitoring video games for inappropriate content (Kent 90). Controversy has never been too far behind the video game industry as it has grown over the last 30 years from its small-scale roots into a \$10 billion a year industry that rivals Hollywood (Riley). The industry has managed to overcome a 1993 Senate meeting about violent video games as well as a rash of school shootings in the late 90s that some attributed to the shooters' obsession with first-person shooter games like *Doom* (Kent 467, 545).

The latest video game series to receive attention from politicians and watchdog groups is the *Grand Theft Auto* series. Although the first game was released in 1997 on the Playstation home system, it wasn't until the gameplay and graphics were refined in the 2001 release of *Grand Theft Auto III* that the game drew serious criticism. Its "go anywhere, do anything" aesthetic allowed gamers to engage in morally questionable acts like car jacking, arson, prostitution and murder. In June, the controversy came to a head when one gamer discovered a sex-based mini-game hidden deep in the code of the latest version of the game, *Grand Theft Auto: San Andreas* (Lohr). Although it required those playing the PC version of the game to download a game patch and could only be accessed by Playstation and Xbox gamers using a third-party modification device, it was eventually discovered that the so-called "Hot Coffee" modification ("Hot Coffee" being the game's euphemism for sex) was, in fact, a part of the game's original code (a fact that the game's publishers, Rockstar Games, originally denied) (Thorsen). Eventually, the video game industry's rating board raised the rating on the game from "Mature" (suitable

for gamers 17 and up) to “Adults Only” (the video game equivalent to NC-17, which caused many major stores to pull it from the shelves), and Rockstar Games recalled the game, releasing a new edition with the offending code excised (ESRB).

While this isn’t the first time there has been controversy about sexual content in video games or problems with game modifications – *The Sims* and *Tomb Raider* series drew some heat for fan-made “nude patches” for characters (Consalvo 194) – this story has renewed politicalⁱ and media interest in the conflict between the demand for new video games and the need to protect children from accessing potentially inappropriate content. In this context, the “Hot Coffee” controversy will undoubtedly get the attention of both video game theorists and cultural commentators interested in the psychological effects of violence and sex in video games.

In addition to being a cause célèbre for pundits and concerned parents, the “Hot Coffee” case points to one of the most fundamental splits in video game theory today. While there is plenty of interest in the various cultural aspects of video games, one of the biggest questions in the field today is whether video games constitute narrative. Are video games a narrative form? If so, do they resemble other forms of narrative such as film, television, and prose? Should we be focusing on the narrative dimensions of video games or are there other, more important facets of video games we should be studying in order to understand how they work?

Before we examine this split, we should briefly define narrative and gameⁱⁱ. In defining narrative, we could easily select a rigid theory that acts “like a semantic police” with very specific rules and dimensions to keep out “illegitimate” texts, but narrative theorist Marie-Laure Ryan warns that this could endanger narrative’s “theoretical

vitality” (Ryan, “Narrative,” par. 5). The alternative, an inclusive definition that welcomes all texts being claimed as narrative to the narrative fold, runs the risk of blurring the distinction between narrative and other “products of mental activity” (Ibid.). Ryan instead suggests a compromise between the two. She outlines a “fuzzy set” definition of narrative, where various levels of narrative membership could exist. These could vary from texts unanimously considered to be narrative to texts less frequently seen as narrative. This “fuzzy set” definition is one I will be using. More specifically, I would also define narrative as a coherent and significant telling or retelling of a fictional or non-fictional event or events. Narrative is coherent because it orders the events in a pattern that can be easily followed, whether it is chronological or based upon interpreting connections between non-chronologically presented events. It is significant if the events presented entertain, educate, or evoke an emotional reaction from the audience.

Ryan also suggests a definition for game. Games are “freely played, and played for their own sake” and have ironclad rules (“Narrative as Virtual Reality” 177-8). While Ryan’s definition hits the crucial points, video game designer and theorist Celia Pearce gets into useful specifics with her definition. Pearce defines games as “a structured framework for spontaneous play” and lists several things that games have in common: goals, obstacles, resources, rewards, penalties, and information. (Pearce 113) Goals are what every game playerⁱⁱⁱ (or players) is shooting for, the ultimate purpose and task of the game. Obstacles are things that are designed to prevent you from obtaining or completing the goal. Resources assist you in the pursuit of the goal. Rewards, frequently in the form of more resources, are handed out for game progress. Penalties, in the form of defeat or more obstacles, are handed out for failing to overcome obstacles. Information can be

possessed by all players and the game, only the game, only certain players, and in some cases can change from one state to another. (Ibid.) Pearce's analysis of video games in addition to more traditional games and usage of the term spontaneous play make her definition more useful to this paper's goals.

There are two main approaches to the question of whether video games are narrative, namely, ludology and narratology. Inspired by theorists like Espen Aarseth, the concept of ludology was popularized by game developer and theorist Gonzalo Frasca. Frasca coined the term ludology (from the Latin word *ludus*, meaning game) to refer to the "discipline that studies games and play activities" (Frasca, "Ludology Meets Narratology" par. 12). He states that video games should not be seen as extensions of forms like drama and print narrative (Frasca 221-2). Video games are based on simulation structures, which are not inherently narrative and allow interaction, rather than most traditional media, which are more narrative and resist interaction, according to Frasca (223-4). Aarseth's own theory, espoused in *Cybertext*, is that video games are part of an entire spectrum of what he calls ergodic literature, texts that require nontrivial effort to traverse (Aarseth 1). These texts range from the fortune-telling text *I Ching* to the randomly generated novel *Composition 1* to the computer game *Adventure* (9-10, 13). Jesper Juul argues that games are not narrative because they don't fit the "media ecology" of movies, novels, and theatre, because time is experienced differently in a game than in a narrative, and because "the relation between the reader/viewer and the story world is different than the relation between the player and the game world" (Juul, "Games Telling Stories?" par. 5).

Other theorists, including Janet Murray, Henry Jenkins, and Mark Stephen

Meadows, view video games as a narrative-driven or potentially narrative-driven form. Murray believes that video games and other similar forms are slowly developing from their current, primitive form into something she calls cyberdrama, an immersive experience similar to *Star Trek*'s holodeck. The model Murray has in mind is that of an interactive theater (Murray 271). She views authorship in video games as "procedural;" a video game's developer(s) create the rules and choreograph the game's performance for the "interactor," who plays or performs the game with limited effect on the narrative (151-2). For his part, Jenkins claims narrative is embedded in the structures of games and realized by playing a game (King and Krzywinska 21). More specifically, games tell stories by organizing spatial features (Jenkins and Squire 65). Finally, Meadows defines "interactive narrative" like this: "a time-based representation of character and action in which a reader can affect, choose, or change the plot. The first-, second- or third-person characters may actually be the reader. Opinion and perspective are inherent. Image is not necessary, but likely" (Meadows 62). Interactive narrative resembles a flow chart, with the complexity of the branching paths dependent on text type and authorial intent (64-6).

How can a salacious game modification resolve this split in the field of video game studies? By pointing us towards another way of looking at games. Traditionally, most theorists have studied video games with more or less linear, straightforward narratives. In the last few years, the video game industry has moved towards software with increasingly open-ended gameplay options, and gamers are increasingly pushing the limits of game developers' intentions. The *Grand Theft Auto* series possesses open-ended gameplay, also called emergent design, while the "Hot Coffee" modification is an example of gamers pushing the limits, also known as emergent gameplay.

In this paper, I intend to show that each intended and unintended gameplay mode within a video game possesses a different level of narrativity and interactivity, or game-like behavior. We can then set up a spectrum for each part of the game, noting how narrative or ludic it is in behavior. On one end there would be completely narrative, non-interactive texts; texts that essentially are not video games. On the other end would be completely game-like texts, ones that possess no narrative at all. Nearly every video game and video game mode created will wind up falling somewhere between these two poles. In order to fully understand the possibilities and limitations of video game narrative, such analysis and differentiation is necessary. Such an approach follows in the theoretical footsteps of Ryan, suggests that, while parts of video game narrative can be problematic (narrative themes are not always used, narrative themes can be ignored while playing, playing the game is different from retelling the events of gameplay), we shouldn't exclude video games from the domain of literary narratology but make room for them (Ryan, "Beyond Myth and Metaphor" final par.).

To demonstrate the productiveness of this approach, I engage in an in-depth analysis of the first-person shooter games *Halo: Combat Evolved* (commonly referred to as *Halo*) and *Halo 2* for the Xbox console. I have chosen the games in the *Halo* series for several reasons. For one thing, they are extremely popular. As of January 2004, the original *Halo* had sold 4 million copies worldwide since its 2001 release (Bishop). In its first day of sales, *Halo 2* sold 2.4 million copies and garnered \$125 million in sales (Morris). Second, they are console games (although the first *Halo* was released in modified form for the PC). Most emergently played games are PC-based, not console, because it is easier to alter the code on a computer game to suit a player's whims. Third,

emergent gameplay appears more frequently in games that already welcome and reward creative gameplay, like the *Grand Theft Auto* series or the *Sim City* series. *Halo* does encourage some creativity in gameplay, but is not nearly as open-ended as those games are. Finally, despite the limitations of being a console game with a fairly linear gameplay path, emergent gameplay has still been developed from the *Halo* series.

In analyzing the *Halo* series, I use both ludological and narratological ideas to explain the standard gameplay modes provided within each game, testing the strengths and limits of these concepts. I then describe and demonstrate examples of emergent gameplay, methods of playing that are not specifically included in the games but can be taken from the games. My conclusions places all the possible gameplay modes in the *Halo* series of games along a narrative/ludic spectrum, discussing why some modes are more or less narrative/ludic than other modes.

A Ludological Analysis of *Halo* and *Halo 2*

For the most part, the gameplay modes the developers have provided for the *Halo* series follow *ludus* rules, which apply to games that have a winner and a loser, and not *paidia* rules, which do not (Frasca 230). *Ludus* games, according to Frasca, follow a three-step outline similar to that of Aristotelian stories: acknowledging the rules, playing/performing the game, and finishing the game by winning, losing, or shutting off the game (Ibid.). This can be described as a session of *ludus* play (Frasca, “Ludology Meets Narratology” par. 51). In *Halo* and *Halo 2*, there are three ways to play the game: by one’s self in campaign mode, with another player in cooperative mode, and against up to 16 players in multiplayer mode. In *Halo*, the final option can be done on one television with the screen split into up to four segments for four players, or, by connecting four

televisions and Xbox systems with Local Area Network cables, the game can be played with 16 players. *Halo 2* introduces an option to play the game over the Internet using its Xbox live service, which accommodates up to 16 players as well.

On a fundamental level, the gameplay for the provided modes in *Halo* and *Halo 2* is not all that different from what is widely regarded as the first first-person shooter game developed, *Wolfenstein 3-D*. While not truly three dimensional, the usage of a vanishing point perspective imitated a 3-D perspective, and it was the first game to combine guns and bloody violence with the labyrinthine maze games that inspired it. *Halo* and *Halo 2* also owe a large debt to the *Doom* series, which introduced a more three dimensional experience to the game world, more atmospheric graphics and sound, and modifiable content. More importantly perhaps was *Doom*'s introduction and popularization of online multiplayer "deathmatches," which were done over LAN connections and modems (Bryce and Rutter 66). Online or not, multiplayer modes are a crucial feature to almost every first-person shooter game released since *Doom*. Finally, *Halo* owes a debt to the *Quake* series, which was the first to introduce a fully three-dimensional game world and, with *Quake 2*, allowed players to customize their avatars (67). Like its predecessors, the three gameplay modes present in the *Halo* series all feature a first-person perspective that is only violated during breaks for narrative cut-scenes (which can be skipped), when the avatar dies, or while the avatar pilots a vehicle. *Halo* and *Halo 2* combine fundamental aspects of these games with new twists on the formula to create a game that has won acclaim from gamers and game magazines both for its single and multiplayer modes.

The first gameplay mode I will examine with a ludological approach is the single-player campaign mode. The goal in the campaign modes of *Halo* and *Halo 2* is fairly

simple. In order to win the game, players have to successfully progress through a series of levels, usually by killing enemies that get in their way. Completing levels also requires gamers to occasionally complete certain tasks given to them by the game, like searching for and protecting fellow soldiers from the bad guys. Progressing through all the game's levels earns you victory. Although temporary, defeat occurs whenever the main character dies, either by taking too much damage from enemy fire or falling, or by failing to complete level objectives. After dying, players start over again from checkpoints sprinkled throughout the levels. They have an unlimited number of times they can attempt to progress through the game. The game can also be saved and returned to later. Because these games are so long (approximately 16 hours to beat *Halo*, 10 hours for *Halo 2* (Fielder 1, Kasavin 2)), Frasca's idea of a successful *ludus* session becomes, more realistically, a series of sessions. One could certainly attempt to play through the two *Halo* games in one unbroken session of gameplay, but it is much more likely that one will take periodic breaks after beating levels or sections of levels, save the game, and return to it at a later time.

The basic rules of campaign mode gameplay are relatively simple. The main character can only carry two weapons (ranging from pistols to alien energy weapons to rocket launchers) at one time, although players can alternate and reload weapons by pressing certain buttons on their controller. Gamers can switch and drop weapons throughout the course of the game by picking them up off the ground. Players can also press a button to use their chosen weapon like a club to physically attack enemies. Different weapons work best in different situations and against certain types of enemies: shotguns do lots of damage but only when close to an enemy, needlers home in on

enemies but are ineffective against vehicles, rocket launchers have plenty of power but limited ammunition, and so on. Players also get two types of grenades, which have slightly different behaviors. Fragmentation grenades function like standard grenades, while plasma grenades stick to objects (including enemies). There are two life meters in *Halo*. The first one acts as a shield, which is gradually depleted by damage. When it is completely removed, the main character has a limited amount of damage he can take before he dies. However, after a short period of time without taking damage, the first health meter will completely regenerate. Damage done to the second set of health meters can only be replenished by finding health packets in game. There are also two buttons that allow the avatar to jump over obstacles and use a flashlight in darker areas for a limited amount of time.

There are some key differences to the gameplay in *Halo 2*'s campaign mode. The biggest change is the introduction of a second playable character. After completing the first few levels of the game as the avatar from *Halo*, the game switches to a new avatar. Players will switch back and forth between these characters throughout the game. The new character has the ability to temporarily become invisible until players either fire a weapon, get hit by an attack, switch it off or let a certain amount of time elapse. The invisibility device, once used, takes a certain amount of time to recharge. The health meter in *Halo 2* is simpler. Once the energy shield is down, you can only take a certain number of hits before dying, but letting the energy shield regenerate also resets that number of hits. Characters can wield two smaller weapons at the same time, essentially allowing them to carry three weapons, but there are disadvantages to this. Using one's gun as a weapon or switching to a back-up weapon makes the character dispose of one of

the guns being dual-wielded, and grenades cannot be used while dual-wielding. Finally, characters can approach vehicles being driven by the enemy and steal them.

The key to success in campaign mode is fighting smart. The game becomes less difficult when stealth and cover are used (whenever possible). Stealthy attacks save ammo, while utilizing cover for protection can lessen or prevent damage from enemy fire. On lower difficulty levels, working with fellow marines can be effective; on higher difficulty levels, where fellow soldiers tend to die faster, it often makes more sense to kill the troops before the bad guys do, so it's easier to collect their ammo (which is also scarcer on higher levels). There is also strategy involved in deciding what weapons to use. Since players are only able to hold two weapons (three in *Halo 2*), because some alien weapons aren't reloadable, and because ammo is scarcer for some weapons than others, choosing the right weapons is crucial. Players have to think ahead about what enemies are coming up next, what weapons work best against them, and what distance they will be engaging them from. Being caught with the wrong weapon for a situation can make fighting out of it harder; some enemies are more resistant to the weapons the humans use, while some are actually harder to kill with alien weaponry. Gameplay frequently becomes a matter of trial and error, dying over and over again to see if using a different weapon or opening a different door to enter a new area will get players past a difficult portion of the game.

The cooperative mode of *Halo* and *Halo 2* is essentially the same as the regular campaign mode, only with two players (each player gets half the screen for their display). Although the ultimate goal of the game stays the same even with two players (beating all the levels), the strategies and gameplay involved in reaching that goal do differ slightly.

Most importantly, death no longer causes players to have to start over from a checkpoint. As long as a player's teammate is still alive, that player can continue to progress through a level. After a certain period of time, the dead player will come back to life, once his or her teammate is out of combat and in an area free of bad guys. Once another player dies, the surviving player's goal usually switches from progressing in the level to staying alive and getting to a point where the second player can respawn. Teamwork becomes key to the gameplay in cooperative mode. Players can split off into teams to complete objectives faster (although they are only allowed be a certain distance apart before one player is warped to the other's position), provide covering fire for one another, or man vehicles more efficiently. Depending on the players' individual skills, they can make the game much simpler to defeat. Of course, they can work against each other, collecting ammo and health packs that the other player sorely needs, refusing to work as a team, and even firing on and killing each other.

Multiplayer mode differs from both campaign and cooperative mode in its focus on inter-player conduct and emphasis on gameplay rules. While the goal in campaign and cooperative mode is to progress in a mostly linear fashion through all the levels, the emphasis in multiplayer mode is squarely on the competition between multiple players, the various ways this can be played out, and the various places it can be played out at. In campaign and cooperative mode, the reward for beating a level frequently consists of cut-scenes to further the plot, with a longer cut-scene as a final reward for completing those modes. In multiplayer mode, the only reward for victory is bragging rights and a computerized voice announcing who won.

What makes victory in multiplayer mode a satisfying accomplishment is the fact

that, in order to win, a player must overcome flesh-and-blood opponents whose behavior is unpredictable or at least non-algorithmic and master the various maps and game rules one uses in multiplayer mode. Different strategies become more effective on different maps. Some maps, with hills and wide-open spaces to move through, are ideal for utilizing sniping. Other maps consist of narrow corridors that encourage close-quarters combat. And maps that provide vehicles encourage players to try to find and drive those vehicles. As for game rules, games can be played with a variety of winning situations, each of which changes the strategy involved in gameplay. Depending on the game rules, victory can be accomplished by simply defeating one's opponent the most times in a certain time period, retrieving a flag from the opponent's bases, placing a bomb in the opponent's base, conquering the most territory, holding onto an item longer than anyone else, getting a certain power-up and staying alive with it for a certain amount of time, or racing through a level (Cirillo 26, Voirin 22). Some of these modes are every player for themselves, like "Juggernaut" from Halo 2, where the goal is to become the Juggernaut and survive attacks from other players for a set period of time. Some of these modes are team-exclusive, like "Capture the Flag" or the bomb-planting "Assault." And some modes can be played as teams or individually, like the standard deathmatch mode of "Slayer." In many game modes, there are additional tweaks that can be made to further increase the number of gameplay options, such as specific time limits, number of kills to victory, weapons used, and handicaps or bonuses handed out to even out gaps in playing ability among players. While the shooting aspect stays in every one of these multiplayer modes, each game will play out differently and have very different strategies used based on the rules, the weapons available, and the presence or absence of teams.

Both Frasca and Juul would probably concede that there is a narrative element to the single and cooperative campaign modes of the Halo series, although it isn't always immediately clear and accessible.

Most modern, single player non-arcade games such as Half-Life (Valve software 1998) actually let you complete the game: through countless saves and reloads it is possible to realise the ideal sequence that Half-Life defines. Obviously, only a microscopic fraction of the play sessions actually follow the ideal path, but Half-Life does succeed in presenting a fixed sequence of events that the player can then afterwards retell. (Juul, "Games Telling Stories" par. 12)

Depending on one's interpretation of the designers' intent, and depending on how one feels about the importance of breaks in the narrative in other textual forms, these multiple ludus sessions can be seen as disruptive or not disruptive to narrative and game. As I said earlier, the length of these game modes makes it unlikely that the designers intended for the single/cooperative modes to be played through in one sitting. Therefore, depending on one's perspective, the cut-scenes and other breaks in gameplay are either an integral part of experiencing the text (like chapter breaks in most novels, the act structure in most plays, or commercial breaks for television) or disruptive of the narrative (like getting up in the middle of a performed play or a film at a movie theater). Most ludologists would argue that gameplay breaks are an important part of the game structure. Because the designers built a save feature into the code of the game that allows players to save their progress and return at a later time, gameplay breaks were an intended part of the game's design. Whether or not that interrupts the narrative flow of the game is secondary, both because narrative isn't a ludologist's primary concern and because a gamer who forgets the events leading up to their save spot can watch the cut-scenes and play through the levels leading up to where their progress finished previously. In fact, ludologists might argue that gameplay breaks serve more of a ludic purpose, by lessening the penalty of

death and making it easier to finish the game by spreading it out over multiple sessions, then they do a narrative purpose, by breaking up the action into chunks that function like the chapter or act breaks in novels and theater.

It should be noted that in cooperative mode there is an odd disconnect between the cut-scenes, which show only one of the players' avatars, and the gameplay, which clearly involves two avatars. This is made all the more jarring by the fact that these cut-scenes are rendered with the same graphics used in gameplay. Using the same graphics engine for cut-scenes that is also used for gameplay is one of the least intrusive methods of inserting cut-scenes into a game, but this effect is lost when the cut-scenes don't perfectly match the gameplay in something like the number of avatars present. (Howells 115). This lessens the narrative effect of the cut-scenes in cooperative mode.

More troublesome to Juul is the idea that these sessions of ludus play in the single-player and cooperative modes are narratives by way of retelling.

Correspondingly, if we recount a game of chess, our playing of the entire *Half-Life* game or a multi player game of *Starcraft*, the existents and events will be transferred, but not the dynamic systems. Our retelling will not be a game, and in fact much of the vast journey that it takes to complete *Half-life* would be excruciatingly dull if retold in any detail. (Juul, "Games Telling Stories?" par. 19)

The fallacy Juul is attacking is the idea that a *game* is a narrative because the *events* of the game can be told as a narrative. While there are moments in the *Halo* series that are narrative, like the cut-scenes, and the game's division into levels resembles the narrative structure of narrative forms like theater and novels, much of the gameplay experience of *Halo* doesn't immediately contribute to this. Dialogue spoken by other characters during gameplay occasionally reflects on the story presented by the cut-scenes, but it is more often used to give the game world more depth or to help the player navigate through

levels. It's key to note that the cut-scenes are skippable. The game can be played and completely successfully without getting involved with the narrative beyond the little bits of it that filter into the gameplay experience. What's left if we ignore the cut-scenes is a series of battles, travels, and backtrackings through levels to find items and objectives necessary to continue. The narrative constructed by these actions would be extremely repetitive and dependent on violence, to the exclusion of noticeable character or plot development. It is because there is a disconnect between narrative and gameplay that people can create gameplay walk-throughs for *Halo* and *Halo 2* that don't ruin the plot.

Although Juul says multiplayer games provide more opportunities for gamers to create more interesting narrative retellings of a multiplayer session (Juul, "Games Telling Stories?" footnote 2), I would argue that within the actual gameplay itself, the multiplayer modes of the *Halo* series are less dependent on narrative than the campaign and cooperative modes. Other than the usage of character sprites and level designs from the campaign and cooperative modes, there is little narrative tissue connecting the multiplayer mode to the other modes provided. There are no cut-scenes from the game in multiplayer mode and, in nearly all multiplayer sessions, the players will be playing as characters who would be on the same side in the game's campaign mode (In *Halo*, only characters that look like the main avatar are available. *Halo 2* does allow players to play as the main avatar or an enemy character). If analyzed with the filter of what occurs in the campaign and cooperative modes of *Halo* and *Halo 2*, multiplayer mode makes little narrative sense. Why would these soldiers be attacking each other, especially if two of them work together in the cooperative mode?

Having examined the *Halo* series with a ludic approach, let's look at some of the

limitations it has. Frasca believes games are predicated on the concept of simulation, and that video games structure simulation much like traditional narrative forms such as novels structure representation (Frasca 224). But unlike flight simulators, hunting arcade games, or *Sim City*, it's a bit more difficult to figure out what the *Halo* series is a simulation of. This is because of the narrative and thematic elements of the games. If we broadly interpret Torben Grodal's view of video games and "interactive virtual reality" – that these forms are "simulations of basic modes of real-life experiences" – there's a problem (Grodal 129). The *Halo* series is quite obviously not a simulation of a real-life experience. The players are not really cyborg soldiers, we are not currently colonizing a multitude of planets in space, and we are not fighting a losing war against a group of aliens who want to wipe us out of the galaxy. To be sure, Grodal is right to say that games work as a simulation of what it might be like for the eyes, ears, muscles, and mind to experience events similar to this. In the case of *Halo*, though, there isn't a perfect overlap between what the game world presents and what a gamer experiences. The first-person perspective isn't perfectly first person; it's still players looking at a screen presenting something as first person. True first-person would be something like the virtual reality helmets that fell out of fashion years ago, where the action did look like it was happening right before your eyes. This first-person perspective is also violated when a player dies, during cut-scenes, and when one is piloting a vehicle. The haptic feedback from gunfire (the controller shakes whenever the avatar is hit) does not measure up to the true effects of being hit by gunfire. And time experienced in game does not perfectly reflect reality. In short, video games are not as far along in their attempts to embody simulation as textual forms like novels and movies are in their embodiment of

representation.

Another flaw in the ludologist's argument against games being narrative is Juul's critique about games not being a part of the standard "media ecology" of books, cinema, and theater. Juul is correct in saying that video games lose some of what makes them video games in the process of conversion from video game to movie. The old *Star Wars* arcade game does not follow the narrative arc of the movie, and neither do the *Mortal Kombat* movies follow the narrative arc of the games (Juul, "Games Telling Stories?", par. 24). Similar arguments can be made about the game version of *Goldeneye*, which provides additional scenes/levels not included in the movie, or the game *Star Wars: Battlefront*, which takes events that occur in the movies, removes much of the rest of the films' narrative from the game, and inserts additional non-movie scenes/levels. However, there is still significant overlap between video games and other narrative forms like television and cinema. The best example of this comes in the form of the cut-scenes that pepper the *Halo* series. In *Halo*, cut-scenes serve both a narrative and a ludic purpose: they provide a narrative frame to the game, and they serve as a reward to gamers for progressing through the game besides self-satisfaction (Howells 112-13). Cut-scenes are, in fact, the only tangible reward *Halo* and *Halo 2* provides gamers for progressing through the game; there are no points, money, or other prizes awarded to players for killing their enemies. Almost every game provides those players skilled enough to complete the game an end-game movie, usually a longer and more detailed wrap-up version of the cut-scenes presented earlier in the game, and the *Halo* series is no exception. Failure to present an adequate end movie frequently disappoints gamers; *Halo 2* in fact suffered in critical ratings from many game magazines and fans for the abrupt

cliffhanger ending it provided (Howells 113-14, Kasavin 2). Although cut-scenes are almost always non-interactive and can be skipped in many games, they are still included in the game. Therefore, they should not be dismissed while analyzing a game. The importance of the narrative presented in cut-scenes may differ from game to game, but there is obviously a reason for including a narrative element in games that merits examining that narrative.

A Narratological Analysis of the *Halo* series

Murray argues that "digital environments" can be defined by four key characteristics: they are procedural, participatory (these two make environments *interactive*), spatial, and encyclopedic (these two make environments *immersive*) (Murray 71). Murray lists three aesthetic qualities of digital environments: they give players *agency* to take action, they allow for *immersion* of players in a game world, and they allow for player *transformation* into a new character or persona. What Murray calls procedural/participatory and interactive falls under what Manovich calls "algorithmic" (Manovich 221-2). Meadows lists three principles that define interactivity: input/output, inside/outside, and open/closed. The Input/output principle means a change to the system made by a player leads the system to present the player with something that further encourages input. The Inside/outside principle suggests that the world inside the game should be engaged with the world outside the game. The open/closed principle says that a system should improve the more it gets used. (Meadows 39-43)

As mentioned earlier, Murray sees the authorship of narrative in video game as primarily the task of the game designer(s) and developer(s).

Procedural authorship means writing the rules by which the texts appear as well as writing the texts themselves. It means writing the rules for the interactor's involvement,

that is, the conditions under which things will happen in response to the participant's actions. It means establishing the properties of the objects and potential objects in the virtual world and the formulas for how they will relate to one another. The procedural author creates not just a set of scenes but also a world of narrative possibilities. (Murray 152-3)

Murray has basically described the tasks of the lead designer or designers of a video game: developing a game engine and goals for players of a game to accomplish, giving players reasons to attempt to accomplish those goals (storyline expansion, points, codes and unlockable Easter eggs), establishing methods of interactions between the player of a game and other characters (be they hostile or friendly), developing artificial intelligence for those characters, and setting up limits for players.

If the designers are choreographers, as Murray claims, they are also in effect very similar to tour guides, focusing the players' participation in a game in the way that they feel will best amuse, inform, educate, irritate, challenge, or entertain players. If we are viewing games like plays, then the various levels of interactivity and ability to alter the narrative arc of a game will fall upon a certain spectrum. Most games involving linear gameplay can be viewed as roughly analogous to standard plays, with dialogue, characters, and the story written ahead of time. Some games, however, are more like improvisational theater, where various elements of the game are up in the air. In a more openly designed game, characters, dialogue, and action can differ from player to player, as can the narrative path players choose to follow. Ultimately though, as in most improvisational theater, there are frameworks for what can or cannot be done put into place. There are only a certain number of people who can be found guilty of the murder in a standard mystery dinner theater performance. And when characters violate audience expectations about their behaviors in improv, it makes a play a mess for the audience to

follow. Games usually put strict algorithmic and coding limits on what players can or cannot do, and where the narrative can go. Mario is physically unable to attack Luigi or the Princess and he cannot team up with his arch-nemesis Bowser in *Super Mario Bros.* In games like the *Grand Theft Auto* series, the do-everything spirit is limited by the increasing amounts of police attention players receive as they continue their reign of terror, health meters, physical map boundaries, and the fact that players must complete a certain number of main narrative missions in order to explore the entire game world.

The narrative presented in the campaign and cooperative modes of the *Halo* series is the same. It falls somewhere closer to a linear narrative than an open narrative. Gamers playing *Halo* or *Halo 2* with the goal of beating them are going to experience the narrative of the game in the same order every time; once you have beaten a level, you can go back and play it over and over again for fun, but this does not advance the storyline at all. Players can also play favorite levels out of order if they chose. But even gamers playing the game for the gameplay are still going to see the narrative cut-scenes presented, if they chose not to skip them; the narrative element does not vanish in these situations, it is just diminished. In the *Halo* series' campaign and cooperative modes, gamers control the actions taken by the avatar as they progress through the game. They chose which weapons and vehicles the avatar uses; the amount of stealth and strategy used; which enemies are killed or avoided; how much or if any of the narrative cut-scenes are watched; the time it takes to progress through a level; how much backtracking is done.

In any case, the campaign and cooperative modes of *Halo* and *Halo 2* possess a strong narrative framework upon which the actions of the avatar are based, presented

primarily by the narrative cut-scenes and secondarily by the dialogue and action in-game. In the first *Halo*, players play as a character known only as the Master Chief, a cybernetically enhanced soldier. Earth in the universe of this game has been forced to colonize other planets, both for living space and natural resources. At some point, Earth and its colonies expand into the territory of a collective group of alien species called the Covenant, who respond by viciously attacking Earth's colonies. Earth and its colonies are able to hold their own in ground warfare (thanks in part to the development of several soldiers similar to Master Chief) but are vastly outgunned in space. The beginning of *Halo* follows one such encounter with the Covenant; in order to prevent the Covenant from discovering Earth's coordinates, the ship that Master Chief is on, *The Pillar of Autumn*, makes a random lightspeed jump. After Master Chief is awakened from cryogenic stasis (the reasons why he is frozen aren't immediately explained), the aliens start boarding the *Pillar of Autumn*, forcing Master Chief and the rest of the crew to abandon ship. Luckily, they've managed to wind up close to a ring-shaped planet, and the survivors flee to there. After rescuing some of his fellow troops, the Master Chief discovers that the planet they are on, Halo, is a Covenant superweapon. Ordered by the ship's captain to stop Halo from being used at any cost, Master Chief explores the planet and fights waves of enemies, including the Flood, a bunch of parasitically zombified Covenant whose spread Halo is meant to prevent.

In the *Halo* universe, *Halo 2* takes place almost immediately after the events of the first *Halo* game, with the Covenant fleet finally managing to discover the location of Earth. Master Chief has to spearhead the resistance to this attack, and then launch a counterattack on the aliens' home world. Players also get to play as a character called the

Arbiter, who we discover was one of the Covenant commanders who failed to stop Master Chief from destroying Halo in the first game. He gets a second chance to prove himself by his superiors, who give him a series of tasks that are essentially meant to be suicide missions. He eventually finds himself in the middle of a civil war between the different species of the Covenant. Up until the point where we first get to play as the Arbiter, the beginning of *Halo 2* closely mirrors that of *Halo*; in both games, players have to escape a similar ship being boarded by the enemy and then engage in a guerilla war on Earth similar to that on the ring planet in *Halo*. Both games even utilize the same scene of Master Chief's vision slowly coming into focus after crash-landing on a planet.

When examining campaign and cooperative mode from a ludological perspective, the spatial and encyclopedic details of games often get overlooked. These details are what make games, in Murray's words, immersive. While Aarseth claims that "the dimensions of Lara Croft's body, already analyzed to death by film theorists, are irrelevant to me as a player, because a different-looking body would not make me play differently" (Aarseth, "Genre Trouble" par. 9), the appearance of Lara Croft in the *Tomb Raider* series is not irrelevant, nor are the graphics and sounds of other games irrelevant. Likewise, the spatial elements of the *Halo* series and other video games, which include level design, graphics, sound, music, and dialogue, are crucial to the way we interpret games as texts. The gameplay of the *Halo* series is not dependent upon the graphics and sounds presented by the games. Players can turn off the sounds simply by muting the television. With the right programming know-how, someone could theoretically remove much of the graphical polish on the sprites and levels, leaving just the bare minimum of graphical interface necessary to play the game (wire-frame sprites and visible walls for level pathways). But

players who chose to remove graphics and sound from the game would find it much less entertaining, because those graphics are crucial to creating a game world that feels real, invites interaction, and make the player want to explore the space and the narrative of the game. As when we watch a movie or a play, we are willing to create belief in the reality a video game presents, but only if we are presented something believable (Murray 100, 110). Even though players are given the agency to defeat the aliens in *Halo*, they are still presented with an immersive reality where they are meant to be feared. This reality is supported by the behavior of the Marines, who show confidence until they take gunfire from the aliens, after which they began to yell in fear. To mention a further detail that ludologists would be hard-pressed to explain: the alien weapons look and sound different from the human weapons, although these differences do not have much bearing on gameplay. The aliens themselves are ominously presented; they all have creepy reptilian features, their voices are computer-altered to be deeper, squeakier or (in the original *Halo*) to speak backwards; also, they roar when they take gunfire and scream in agony when they are defeated. The music in the game serves as mood music. When exploring a strange alien structure, atonal experimental music will frequently play in the background. When involved in a fierce firefight, the game will kick in with heavy guitar rock to pump up players. (*insert Halo 2 criticism here?*)

While a more abstract concept to grasp than graphics and sound, level design is also crucial to immersion in campaign and cooperative modes. “Effective game design can yield spaces that encourage our exploration, provide resources for our struggles for dominance, evoke powerful emotions and encourage playfulness and sociability” (Jenkins and Squire 65). The campaign and cooperative modes of *Halo* and *Halo 2* have

what Jenkins and Squire would term “hard rails;” levels can be explored and interacted with in various ways, but there is ultimately a fairly specific path of progress one has to follow in order to continue to the next level. It is possible to get lost in some of the levels, since there are no comprehensive maps of each level, but wandering around until a group of enemies is found usually rectifies this problem. The presence of enemies usually indicates the next pathway players want to take. There are even subtle but significant differences between the way levels are presented in *Halo* and *Halo 2*. The levels in *Halo* seem larger, and the divisions between levels seem more significant, as nearly every one ends with a narrative cut-scene and a loading screen. *Halo 2*’s levels seem smaller, but not every level ends with a jump to a cut-scene (and all loads take place during gameplay), so multiple “levels” will frequently take place in one area of the game. For instance, although the first levels of *Halo* and *Halo 2* are very similar in their narrative and spatial framework, leaving the ship in *Halo* takes place in one level, while there are three separate levels dedicated to leaving the vehicle in *Halo 2*. The most significant level breaks in *Halo 2* seem to occur whenever players are forced to switch between playing as the Master Chief and as the Arbiter.

Although not as transformative as the myriad of character appearance and development options provided by most role-playing games, the impact of game presentation in the campaign and cooperative modes in the *Halo* series does allow gamers to imagine what it would be like to be Master Chief. The first-person perspective allows players to better identify with Master Chief. Unlike a third-person game perspective, where gameplay feels more like controlling the actions of a character separate from ourselves, a first-person perspective lessens the distance between the avatar and our

input, making it feel more like the player and Master Chief are one and the same. The game also presents realistic graphics, sounds for weapons and vehicles that fits our expectations for what they are supposed to sound like, dialogue spoken by minor characters that makes them more than enemies to shoot or friends to protect, and level design that, when explored, matches our expectations for alien vessels or Earth cities, just to name two examples.

Other aspects of the transformative potential of video games are still rudimentary. The *Halo* series does not yet employ what Murray calls kaleidoscopic narrative, where players could potentially jump into the role of several characters in a scene; the fact that many of the characters in *Halo* serve primarily as one-dimensional foils to shoot at or protect discourages this degree of narrative complexity (157). *Halo 2* employs a rudimentary version of this kaleidoscopic narrative in its twin storylines, one for the Master Chief and one for the Arbiter. The two only meet once and very briefly in the course of *Halo 2*, but the game consistently switches back and forth between the two narratives in a manner very similar to cinema (156).

One of the problems of with narratological approaches to video games is that narratologists' ideas arose from the analysis of verbal narratives. They aren't always as relevant to the study of video games as a result. This isn't a problem exclusive to narratologists; Aarseth's conception of ergodic literature includes many texts that have little in common with video games and seems content to utilize much older, primitive video and text-only computer games as examples of ergodic literature. But many theorists who attribute narrative possibilities or see games as narrative-driven tend to include texts other than video games in their analysis, and even exclude some video games.

Previous attempts to map ideas of narrative onto computer-mediated environments are not equally relevant when it comes to the analysis of video games in particular. Take Meadows' concept of interactive narrative, for example. "An interactive narrative is a time-based representation of character and action in which a reader can affect, choose, or change the plot. The first-, second- or third-person characters may actually be the reader. Opinion and perspective are inherent. Image is not necessary, but likely" (Meadows 62). Under this definition, though, at least part of the gameplay in the *Halo* series, the campaign and cooperative modes, would not constitute an interactive narrative, because there is only one narrative thread for the players to discover in these styles. In fact, Meadows analyzes several interactive narrative texts and interviews their creators, but only two of the 15 texts discussed would be considered video games: *Deus Ex 2*, a first-person shooting game with some branching narrative elements, and *Ultima Online*, a massively multiplayer online role-playing game that almost constantly has players and developers creating and furthering narratives and the game world. Meadows' research is therefore only useful for a certain type of game, which *Halo* and *Halo 2* are definitely not. Manovich's "new media," a category that inspires both narratologists and ludologists, include "graphics, moving images, sounds, shapes, spaces, and texts that have become computable" (Manovich 20). Obviously, many of these "new media" are not, in fact, video games. Some of these forms even help comprise elements of video games. Manovich does suggest that so-called "databases" (which presumably could include video games but also other texts such as the interactive novel *Afternoon: A Story*) have narrative possibilities as long as there is an author controlling the semantics of multiple databases linked together for a story and as long as we consider the narrative to

only be accessed by users/players (228). Much like Jenkins, Manovich sees the narrative of video games as a narrative of exploration of space, but in the chapter dedicated to “navigable spaces,” he also includes texts like *Aspen Movie Map* and *Legible City*, which don’t seem to offer the level of interaction necessary to qualify them as video games (247, 257-8).

Even Murray, whose ideas about “digital environments” comprise much of the focus of my narratological analysis, is not immune from using fuzzy terminology. In addition to the term “digital environments,” which is used throughout *Cyberdrama* to describe the texts she hopes to analyze throughout the book, Murray also uses the term “electronic games,” which is never explicitly defined. While the term digital environment includes video games, Murray seems interested in video games only as “incunabular” texts, prototypes similar to early books and cinema that will soon develop into a much more interactive and narrative art form (Murray 28). I would argue that video games have made great strides since *Pong* was first developed, both in narrative and technological aspects, and that the video game as a textual form has, for the most part, stabilized past being incunabular.

But perhaps the best example ludologists’ can cite in critiquing a narratological approach to studying *Halo* and *Halo 2* is the multiplayer mode. Even narratologists would be hard-pressed to find anything explicitly narrative about the content of that mode of play. Besides the presence of characters from the campaign and cooperative modes of the games, maps that sometimes resemble levels in those modes, there is very little to connect multiplayer mode to the narrative of campaign or cooperative mode. *Halo 2* has a little bit more connection to the narrative of the game’s other modes, in that it lets you

play as characters from both sides of the war depicted in the *Halo* series, the Master Chief and the Covenant Elites. In reality, though, the only narrative that exists in multiplayer mode is the generic idea of combat, set up by the specific rules, weapons, and maps chosen for each round of multiplayer action, and whatever narrative the players chose to retell afterwards. The fact that players can tell stories about their experiences in multiplayer mode might be enough for the narratologists, but the ludologists would say that these stories are technically not a part of the game, merely something generated from the game. To ludologists, claiming multiplayer mode is narrative is like claiming a blank Mad Lib is narrative. To them, the object that generates the narrative isn't narrative in and of itself, it's the product that is narrative. Because so many stories can be potentially generated by multiplayer mode, and because nearly all of them are dependent on the same kind of violence, it becomes difficult to argue that multiplayer mode possesses a significant amount of narrative content.

Placing the Intended Gameplay Modes of *Halo* and *Halo 2* On a Narrative Spectrum

Of the three gameplay modes created by the designers of *Halo* and *Halo 2*, the single-player campaign mode is the most narrative. Although it is more game-like than it is narrative-like, *Halo* and *Halo 2* do present consistent, discernible narratives through the games' action and narrative cut-scenes. Slightly less narrative than the campaign mode is the cooperative mode, because the narrative cut-scenes presented do not line-up with the action presented in gameplay. Cooperative mode focuses a little bit more on the interaction between the two players cooperating than it does on the storyline. Multiplayer mode is the least narrative and most game-like gameplay mode in either *Halo* or *Halo 2*.

Although there is an overarching meta-narrative theme of standard warfare, there is little else built-up on top of that idea besides an incongruous conflict between similar looking troops. A session of multiplayer gameplay could lead to a narrative retold by the players, but this is not inherent in the gameplay action. *Halo 2*'s multiplayer mode, because it allows players to also play as the humans' enemies, could potentially present a more plausible narrative, though still not as narrative as campaign and cooperative modes.

Emergent Gameplay and Narrative in the *Halo* series

Although I have talked plenty about the intended gameplay options of *Halo* and *Halo 2*, there are a few unintended gameplay options that should be analyzed as well. Video game theorists have only occasionally mentioned these unintended options, also known as emergent gameplay. One of the few to actually write a paper on this phenomenon is Juul. He defines emergence as “a number of simple rules combining to form interesting variation” (Juul, “The Open and the Closed” par. 5). Juul sees emergence as “the primordial game structure” going back to board and card games, where large numbers of strategies can be developed from a small series of rules. Most action and strategy games, he says, feature emergence. The counterpart to this, progression, refers to games that have a series of puzzles or sequences that can only be completed in one way. These games, Juul argues, allow for stronger game designer control and more cinematic/storytelling elements (Ibid). Games with emergence have strategy guides, which present multiple ways to handle in-game challenges, while progression games have walkthroughs which give you solutions to all the puzzles. *Myst* and older text-based “adventure” games feature progression; *Sim City* and *Grand Theft Auto* are more emergent. Juul's definition is a good place to start thinking about the concept of

emergent gameplay and its roots.

Emergent gameplay is inspired by several concepts also mentioned by theorists: emergent behavior, emergent narrative, and emergent design. Emergent behavior, according to Murray, occurs whenever a computer system behaves in a way unanticipated by its creators (Murray 239-40). One example of this cited by Murray occurs in the programming of “intelligence agent” Lyotard the cat. Lyotard, programmed by Carnegie Mellon’s *Oz* group, was programmed to behave in a certain way towards players interacting with it based on various algorithms meant to simulate its emotion. In any situation, there are several choices it could make to react to a player’s behavior. This unpredictability in behavior is emergent behavior (227-9). Another example of unintended emergent behavior occurred in another *Oz* group character who, thanks to a programming glitch, would occasionally bang its head on the floor. Rather than see this as a glitch, viewers assumed it was a personality quirk (232). Emergent behavior, while occasionally dependent on interaction from a player, is only marginally based on player creativity; players cannot invent new ways for these characters to behave without altering code. Also, game designer Chris Crawford says that because emergent behavior is a random occurrence, it is just as likely that it will result in creating a narrative mess as it will end up turning out the next *Hamlet* (Crawford 261-2).

Likewise, emergent game design involves giving gamers a false sense of control over the nuts and bolts of a game itself. Perhaps the first example of emergent design occurs in the game *Adventure*, when game designer Warren Robinett decided to create a secret room within the game with his name in it (at the time, Atari, the company Robinett was working for, refused to credit designers with creating games). Although Robinett was

unsure whether or not it would be discovered, gamers who mapped out the mazes eventually discovered its existence and searched for the way to get in (a one-pixel gray dot hidden in the maze) as well as its purpose. “For the players, the secret level was the meta-level, the way to truly beat the game and get to the real conclusion” (Robinett xviii). Since then, Easter eggs, cheat codes, and hidden levels have gradually begun to play a more and more crucial role in game design and play. They encourage gamers to explore the coding of a game (by randomly pressing buttons and entering various passwords to search for codes), to read players’ guides and texts (what Ryan would call illustrative texts) to search for Easter eggs, and to explore the game space when playing (2004 Ryan 14). Some codes have little to no effect on gameplay or narrative, like codes that change game graphics and sound. Others can drastically change gameplay, either by making it much easier to progress through a game (making characters invincible or giving them unlimited ammunition) or making it much harder (tougher AI, less health and weapons). And a few, especially codes that let you skip levels, play levels out of order, or access new levels, can change the way the narrative is presented to the player.

Designers, inspired by gamers’ explorative and creative desires, have gradually begun to give them more and more of a feeling of control. Some games keep track of what percentage of items and secret areas players discover in the course of games, in an attempt to keep gamers playing even after they’ve defeated the final boss and “beaten” the game. Some games include multiple endings (besides the win-loss endings inherent in ludic play) depending on the choices players make when progressing through a game. Some games create data that can be used in a sequel or a related game; characters created in *.hack//Infection Part 1* can be brought into *.hack//Mutation Part 2* with abilities

developed in the first game, and college players created in *NCAA College Football 2006* can be imported into the drafts for *Madden NFL 2006*. Of course, there's the *Grand Theft Auto* series and its multiple imitators, which attempt to give gamers the feeling they can go anywhere and do anything while still keeping them on something of a gameplay, if not narrative, leash.

Pearce brings up the concept of “emergent narrative” as a series of narrative operators that can be present in video games: experiential, performative, augmentary, descriptive, meta-story, and story system (Pearce 118). For instance, the narrative presented to players of *Halo* via the game's action and cut-scenes would be experiential; the narrative experienced by those watching *Halo* would be performative; the narrative discussed in the game manuals, novels and movies based on *Halo*, and fan fiction would be augmentary; retelling the events of the game to someone else would be descriptive; and the idea of warring with aliens would be the meta-story. *Halo* does not explicitly provide gamers with a story system able to create new narratives, but as we will discover later, some gamers have been able to play around with *Halo* and form new narratives anyway. Ludologists would argue that the only narrative that should be considered in game studies is the experiential narrative, while narratologists would be more likely to accept the influence of players, video game watchers, and augmentary texts when interpreting the primary text of the game. Pearce's theories, firmly based in a game and video games studies background but still flexible enough to incorporate the importance of narrative in video games, are also helpful in drawing and balancing the line between ludology and narratology.

Emergent gameplay, however, is gameplay unintended by a game's developers or

creators. In talking about emergence, Juul brings up three primary examples of emergent gameplay, which are by no means exhaustive or completely separate from other emergent characteristics previously mentioned. The first one he mentions is rule interaction, which he argues isn't really emergence because it is already programmed into the game. This includes "rocket jumping" in the *Quake* series – firing a rocket into the ground, jumping, and using the blast to propel a player further upward than possible with normal jumps – and proximity mine climbing in *Deus Ex* – placing mines on walls and using them to climb upwards (Juul, "The Open and the Closed" par. 17; Meadows 194). Juul also cites the various possible game sessions that can be generated by the rules of a game as an example of emergence. I would argue that these are, if anything, emergent design, since the game developers have programmed in all the possible combinations of gameplay before shipping a game out. This also leaves out self-enforced gameplay rules that usually function more as codes of etiquette than anything. For instance, in most multiplayer shooting games (*Halo* included) there are unwritten but almost universally followed rules about staying in one space too long. So-called "camping" is a viable in-game strategy with the right weapons and shooting ability, but most gamers find it cowardly and cheap and even occasionally (in online games) set up algorithms to boot players who stay in one spot too long. "Spawn-camping," waiting near where dead players regenerate to life and shooting them before they have a chance to get weapons or their bearings, is considered an especially egregious gameplay violation. The last emergence aspect Juul mentions is emergent strategies, ones that aren't immediately discernible from game rules. He breaks these into "all game strategies," which he calls "imperfectly emergent" and rules of thumb, general strategies like organized teamwork in

team-based multiplayer first-person shooters, and dominant strategies, ones that will always lead to victory. A lot of these emergent possibilities fall more along the lines of emergent design, and he does leave some out. I will now mention those emergent gameplay modes left out by Juul, in order from least to most narrative.

The least narrative and most game-like of all emergent gameplay possibilities in the *Halo* series is unintended game modification. While many video games and first-person shooters (especially *Doom* and *Quake*) actively encourage modifications, thereby incorporating the modification process into their emergent design, gamers still find ways to modify games beyond what designers intended for them. A game modification, intended or not, can vary from game to game. *Doom*'s level editor can be used to create maps that may or may not have any thematic link to the original game. Especially talented players could create a significantly different graphical and sound interface for their levels. *Quake* expanded its modifiability to include the main character's graphics as well, which also potentially presents new narrative possibilities. *Sim City 2000* let players create new graphics for buildings, which doesn't affect gameplay but can potentially shift the narrative into a new area, by suggesting a different time period and geographical setting for the city. *The Sims* series lets players create their own clothes, character designs, household items and homes, which also have the potential to alter the game's narrative frame.

But there also ways to modify a game's code outside the designers' wishes, either to generate features not provided in the original game or to make a game easier to play. One example of the former is a modification to the PC version of *Grand Theft Auto: Vice City* called Multi-Theft Auto. Some players who were disappointed that *Vice City* was not

multiplayer altered the game's code to allow for online play (<http://www.mtavic.com>). An example of a modification making a game easier involves hacking certain objects in *The Sims 2* so that these objects would do things like prevent their characters from aging or making them always fully happy in addition to their normal behavior (Knight). One of the more popular types of modifications in online multiplayer first-person shooters are “aimbots” – programs within a game that will automatically detect opponents and shift a player's aim to the opponents heads for an easier kill (some go so far as to automatically fire once they've aimed for the head). While this makes it much easier for a player to succeed in a game, it is almost universally considered cheating, and most games will boot and prevent players who use them from playing online if they are caught.

Almost every game that is unintentionally modifiable is a computer game, since it is almost impossible with most console systems to modify a game. Most home video game consoles use proprietary CD-ROM technology with heavy copy protection built in to discourage copying and modifying of games. The same kind of protection is also built into the system schematics in an attempt to prevent people from illegally manufacturing systems. However, the Xbox is slightly different than most home systems. Because the hardware powering it is based on a modified version of the Windows operating system, rather than the standalone hardware most consoles use, it is possible to modify the system so it can do several things not supported by the standard set-up (*Wikipedia*). These include saving and playing games straight from the hard drive (instead of the discs games normally come on), adding a larger hard drive, using online services other than Microsoft's proprietary service Xbox Live, and changing the code of games. Many of these modifications involve converting levels that are exclusive to the campaign and

cooperative mode so they can be used in multiplayer mode, adding new weapons to multiplayer mode maps, making weapons fire other types of ammunition (including game characters), and standard cheating tactics as mentioned above. In the case of converting levels to be playable in multiplayer mode, this involves not only a slight shift in gameplay but it also significantly changes the relationship between the two modes of gameplay. Map modifications based on campaign and cooperative mode levels increases the connection between these modes and multiplayer mode. In the case of one *Halo 2* mod, “The Dawn of Warfare,” it completely changes the game’s context to medieval times and weaponry, almost making it an entirely different multiplayer experience, although it is functionally almost the same in terms of gameplay (<http://files.halomods.com/viewtopic.php?t=42361>).

While the narrative changes that occur with new graphic sets, weapons, or game functionality may not be significant enough to brand them new narratives, they cannot be dismissed outright from a games standpoint. A ludic argument could be made that, unless a significant gameplay change is made, that new graphics, sounds, weapons, or narrative focus are unimportant. However, if the game code is the only thing that differentiates one game from another, then there are a lot of first-person shooters and games in general out there that shouldn’t be considered original games. Several video games have been based on engines originally created for other games. *Quake*’s engine was used for a medieval shooting game called *Hexen*, *Quake II*’s engine was used for the ultra-violent shooting game *Soldier of Fortune* and the futuristic *Daikatana*, and various version of the *Unreal* engine have been used for games ranging from first-person shooter *Deus Ex* to action game *Harry Potter and Prisoner of Azkaban* to massively multiplayer online role-playing

game *Lineage II*. Even *Halo*'s engine has been licensed out to create a zombie-based action game, *Stubbs the Zombie in Rebel Without a Pulse*.

Even if gameplay stays fundamentally the same (which isn't always the case), few gamers would agree that two games with identical gameplay and vastly different graphics are still the same game. In fact, Frasca argues that games have meta-rules. A game's ability to be modified, unintended or otherwise, constitutes a meta-rule that signifies the game designer's textual authority. (Frasca 232-3) There is only so much modifying players can do to a game before it becomes another game; some rules in the game have to be unchangeable, or the game isn't really a game, but game creation software (233). Frasca's viewpoint echoes many game designers' opposition to unintended modifications as a violation of their authorial intent, but that doesn't mean gamers are going to stop pushing the line between modification and game just because they might be violating a developer's copyright law. They probably wouldn't think twice if their efforts wound up creating what is essentially a new game, as in the case of *Half-Life* "mod" *Counter-Strike*, which was eventually accepted and bought out by *Half-Life* producer Valve. While *Counter-Strike* is commonly considered a modification, I would argue that it embodies significant gameplay changes that it is a new game. In the case of the *Halo 2* modification "The Dawn of Warfare," the possibility definitely exists that player/designers could eventually take those pieces and convert it into a new game. As it stands, the modification sits on that line Frasca mentions, redefining some aspects of *Halo 2* but still ultimately still viewable as an altered part of that game.

The reason modifications are the least narrative and most game-like of emergent gameplay possibilities is two-fold. First, many modifications are meant to either expand

the gameplay possibilities of a video game, like introducing new maps and weapons to the *Halo* series' multiplayer modes, or assist players in "improving" their skills, like aimbots. Secondly, much like the fine line that exists between different video games developed on similar game engines, significant graphical, sound, gameplay, and narrative changes made in a modification can make that modification more like a new game. It's difficult to make changes to add, subtract, or change the narrative content of a game via modification without creating a new text.

The next most narrative form of game modification is utilizing unintended gameplay "glitches." While technically programmed into games, these "glitches" are frequently parts of the game code that the developers failed to fix or didn't expect players to find and take advantage of. Besides Juul's examples of rocket-jumping and proximity mine-climbing, other "glitch" exploitations include the "Hot Coffee" modification, building functional cities without roads in the original *Sim City*, and the Minus World in the original *Super Mario Bros*. Some of these "glitches" weren't designed to be a part of the original "story" subtending the game but became an essential part of gameplay. Besides rocket-jumping, there's "skiing" in *Tribes*. "Skiing" involves players sliding down hills and building up enough speed to catapult them great distances, a key strategic move (*Wikipedia*). These "glitches" would fall under Juul's ideas of rule manipulation and possibly dominant strategies. Sometimes, glitches affect both gameplay and narrative. The ability to build functional cities with no roads in *Sim City* enables players to build cities with less pollution, but also lets players imagine what such a city would be like. The ability to control the main character of *Grand Theft Auto: San Andreas* while he's *in flagrante delicto* both adds gameplay options and differs from the usual (non-

interactive) cut-scene shown when he has sex. And sometimes, as in the case of Minus World, it's purely explorative, since it becomes impossible to finish the game proper once Minus World is accessed.

In the case of *Halo*, much of the fiddling around with gameplay “glitches” is focused on exploring the level design and the physics system in the game. The designers encourage exploration and experimentation. Levels are almost never played the same way twice, because the number of enemies and their positioning will vary in some places. This prevents players from mapping out specific strategies to get through levels and encourages them to work on general gameplay skills. This also allows players to do “unexpected” things, like taking vehicles deeper into parts of levels without vehicle combat, or, in the beginning of the first *Halo*, accessing areas that would normally take longer to reach with normal gameplay. As for the physics engine, rather than pre-render a number of death sequences for enemies, allies, and the avatar and have them play depending on where the final killing blow strikes a sprite, the *Halo* series utilizes what designers call rag-doll physics. Shooting an enemy with a low-powered energy weapon may cause him to crumple to his knees, while utilizing a shotgun might drive his body back farther. Using grenades or rocket launchers can send bodies flying across the terrain in all directions and even set off chain reactions of other grenades in the area. Vehicles that are destroyed blow up spectacularly and also move in spectacular ways. The physics system is also applicable to games' main characters as well; they die in the same way as every other character in the game, with a whimper or a bang. Players are not immune to watching their character get blown sky high. Perron says in his essay “From Gamers to Players and Gameplayers” that experimenting with *Halo*'s digital environment is an

example of taking advantage of procedural authorship. “The gameplayer uses a great amount of effort, skill, or ingenuity to win a challenge that they have set for themselves of their own free will” (Perron 253).

What are these challenges? Many of them are exploration of territory that developers most likely didn’t intend gamers to visit, like the Minus World in *Super Mario Bros*. The amount of effort required to access many of these areas suggest that they were, in fact, meant to be inaccessible. For instance, traveling to the “bottom” of the ring planet in *Halo* is only possible when playing in cooperative mode. The players must place vehicles in the level a certain way, die in certain spots and blow up vehicles to cross otherwise inaccessible areas (Thibadeau). Other exploration tasks involve climbing out of seemingly contained multiplayer levels, reaching the top levels where doing so is unnecessary, and even exiting the playing field of *Halo* (Halo.Bungie.org). These tasks are frequently dependent on “grenade jumping” – which is functionally just like “rocket jumping” only with the grenades provided in game. Although in most cases the areas discovered are coded into the game – there aren’t always full graphics and in the case of leaving *Halo*, it prevents other players from moving – it should still be considered emergent play. With exploration glitches, it could be argued that they follow from Jenkins’ idea of video game narrative as an exploration of game space. For most players, though, it’s simply another way to test one’s gameplay skills beyond what the developers provided. For these players, the game isn’t over when they’ve beaten it on the highest difficulty level and seen the extra cut-scenes it provides. It’s over when they’ve tested the limits of the game environment in every way.

In addition to exploration glitches, which frequently take advantage of the *Halo*

series' physics system, there are tricks that are merely meant to play with the games' physics. One of the more popular physics tricks is "Warthog jumping." The Warthog is a jeep-like vehicle that can seat three characters, with one driving, one manning a gun in the back, and the other being a passenger. In any gameplay mode, whenever one of the players or marine allies dies, their weaponry remains on the ground for some time, grenades included. A warthog jump involves either killing marines or a player or players dying multiple times around a strategically placed Warthog. After enough grenades are situated around the vehicle, one player tosses a grenade at that vehicle, setting off the remaining grenades on the ground in a chain reaction that blows the vehicle (and any players standing near it) sky high (Glass video). Also interesting is the ability to "freeze" characters by moving back and forth between certain loading zones. Leaving characters alive on one side of the loading zone makes them part of the quick save data made whenever a loading zone is encountered. As a result, you can shoot your weapons across the loading zone at them and no damage will be registered on them – at least until you go back to the other side, when it kicks in again in highly spectacular fashion (Becker video). Other interesting physics glitches include the ability to bounce grenades on elevators, rerouting teleporters on one multiplayer map by blocking one of them with a vehicle, or making the game play in slow motion in cooperative mode by having one player look at the blood from a killed enemy (Halo.Bungie.org).

One could argue that exploration glitches, and, to a lesser extent, general physics glitches, follow from Jenkins' idea of video game narrative as an exploration of game space. For most players, though, taking advantage of these glitches is simply another way to test one's gameplay skills beyond what the developers provided. For these players, the

game isn't over when they've beaten it on the highest difficulty level and seen the extra cut-scenes it provides. It's over when they've tested the limits of the game environment in every way. This holds true more for exploration glitches than it does for physics glitches. While there are some bragging rights involved in discovering a cool physics trick, it usually takes less skill to pull one off. Physics tricks tend to be more about exploring game code, its limits, and how far it can be stretched to do some cool things than about the bragging rights and conquering of game space that the exploration tricks suggest. Still, the idea of exploration narrative that sits over gameplay glitch exploration makes it more narrative than modifications.

By far the most narrative form of emergent gameplay possible in the *Halo* series is machinima. Machinima is the act of playing a video game in a certain way, filming gameplay footage, and then later editing it into something resembling a movie or television episode. An early predecessor to machinima is special fan-films made by re-editing footage of movies or televisions shows with VCRs to suggest new plots or contexts, for example, making it appear that Spock and Kirk had a romantic relationship in *Star Trek* (Murray 41). The first steps taken toward machinima involved utilizing *Doom* and *Quake*'s ability to record gameplay and make video footage from it. Many gamers created "demos," general footage of single or multiplayer gameplay without any added bells or whistles, "speedruns," where players would record themselves completing a game as fast as possible, and "recams," where single or multiplayer gameplay footage would be spliced with video production effects and music (Salen 101, 111). Around 1996, a group or "clan" of *Quake* players realized the potential of the video recording tools the game provided and decided to utilize the game engine not for competition, but

as a sort of virtual stage. Using text communication for dialogue and their in-game avatars as actors, this clan created what is generally thought of as the first work of machinima, *Diary of a Camper* (101). Although the storyline and graphics are fairly crude and undeveloped, it has since inspired gamers to make their own machinima texts. In essence, demos and speedruns are roughly equivalent to objective documentary filmmaking, recams are similar to a more subjective documentary with the producer's opinion injected (subtly or not), and machinima is like standard fictional cinema. Because nearly all machinima is distributed over the Internet, there is less of a standard formal structure to the texts than there is with television or movies. Some films are only a couple of minutes long, while others are as long as full-length motion pictures. Machinima that resemble television series aren't beholden to television's strict time limits. The episodes can be as long or as short as it takes to get to the point and differences in length from episode to episode are possible.

The flexibility to change graphics, setting, and sound on PCs means most works of machinima come from PC games, *Quake* especially. In fact, many of the original works of *Quake* machinima are viewable only within the game. Like *Diary of a Camper*, many of these machinima films rely on slapstick humor reminiscent of *Looney Tunes* and humor based on the first-person shooter game culture. Some epic works do exist, like *Devil's Covenant* and *Eschaton*, but much of it would be unremarkable from a literary standpoint were it not for the creative method of assembling the video footage. While many machinima films follow the general theme of the game that parented them, some do manage to spread out beyond the source, via overhauled graphics and sound. One production team, the ILL Clan, started playfully mocking the system with their first

piece, *Apartment Huntin'*, but eventually utilized different graphics and moved the action to settings like a cheap diner and a presidential campaign rally, drifting almost entirely away from the violent content that defines the gameplay of *Quake*.

The fact that it's more difficult to specially modify game code on a console makes the machinima films based on the *Halo* series all the more impressive. These include *Fire Team Charlie*, a series of comic riffs that eventually morphs into something loosely resembling a episodic narrative; *The Codex*, a dramatic series, similar to fan-fiction, meant to bridge the gap between the storylines of *Halo* and *Halo 2*; and the most popular and notable *Halo* machinima series, *Red Vs. Blue*. *Red Vs. Blue* was created by a group of gamers and budding filmmakers called Rooster Teeth Productions. Originally started in 2003, *Red Vs. Blue* is currently in its fourth "season" of production. Seasons have ranged from 19 episodes to 22 episodes long. Each episode varies in length from about two minutes earlier in the series run up to around fifteen minutes for episodes in later seasons. Episodes are traditionally released weekly on the Web site, and the first three seasons have been compiled on DVD. According to their official Web site, *Red Vs. Blue* is created by connecting "four Xboxes, four copies of Halo and a PC with a Canopus DV Storm capture card and a bunch of Adobe editing software. We run the video from one of teh (sic) Xboxes into the capture card and use that as the 'camera,' the other XBoxes are used for the characters and are run by our puppeteers" (redvsblue.com). The process of writing the script, recording the lines, inserting music, playing the game and capturing the footage takes about 40-50 hours for each episode (machinima.com). Nearly all the footage comes from multiplayer games played in such a way that the avatars/characters seem to be gesturing, moving, and talking normally, but there are a handful of scenes that

borrow footage from the campaign mode, an older game made by Bungie Studios called *Marathon 2*, and *Halo 2* once that game was released (episode 43 in the third season).

The creators also take advantage of a couple of glitches in order to make the characters point their guns at the ground, remove the targeting reticle on the “camera” player’s screen (this began starting episode 46), and have nothing in their hands (redvsblue.com, Internet Movie Database).

Plot-wise, *Red Vs. Blue* deals with a fictionalized conflict between the titular two sides that is meant to take place between the events of *Halo* and *Halo 2*. The main characters on the Red side are Simmons, a sarcastic soldier in maroon armor; Grif, an almost equally sarcastic and slightly less intelligent soldier in orange-yellow armor; their leader Sarge, who sports red armor, a southern accent, and a drill sergeant’s contempt (especially for Grif); and Donut, the dumb new recruit. The Blue side has Church (who wears light blue) and Tucker (who wears green), whose personalities are nearly identical to that of Simmons and Grif, respectively, except Tucker is slightly smarter than Grif and the two possess much more hatred for each other. The Blues also get their own new recruit, Caboose, who turns out to be even stupider than Donut (and wears the titular blue armor for his side). Other characters include the Reds’ repair robot Lopez, a mercenary named Tex, and a medic named Doc. The setting of *Red Vs. Blue* is, most of the time, one of the multiplayer maps, Blood Gulch, a huge desert canyon with the two sides’ bases on opposite (and nearly inaccessible) ends of the impasse.

The narrative of *Red Vs. Blue* starts out fairly primitive, but eventually develops into something more substantial. Much of the first season consists of the characters riffing on various aspects of the *Halo* campaign and multiplayer universe, pointing out

inconsistencies and weird little facts about it. Unlike traditional *Halo* multiplayer gameplay, these episodes aren't dominated by violence. It takes 5 episodes before someone actually fires a weapon, although they are almost always carrying them, and it isn't until the 8th episode when someone finally dies. (Church, who ends up coming back as a ghost, essentially negating his death) This gives much of the first season – and the second season to a lesser extent – a very *Seinfeldian* feel.

Typical of early *Red Vs. Blue* is the very first episode, which consists almost entirely of dialogue between Simmons and Grif, and Tucker and Church. This episode starts with Simmons asking Grif, “Why are we here?” leading him to go on a philosophical rant on existence and God. Simmons then looks at Grif, and says “What? I mean why are we out here, in this canyon?” He then points out the implausibility of their situation. “As far as I can tell, it's just a box canyon in the middle of nowhere. No way in or out. The only reason that we set up a Red base here is 'cause they have a Blue base over there. And the only reason they have a Blue base over there is 'cause we have a Red base here.” As far as they can tell, their conflict is completely pointless; nobody explains it at the beginning of the series, the land they're fighting over is almost completely useless, and before *Red Vs. Blue* they were fighting aliens, not guys dressed in blue. In fact, members of each side seem to hate each other more than they do the enemy; the rest of the first episode is Tucker and Church insulting each other while watching the Reds talk. Other episodes contain similar rants on the naming conventions of vehicles in the game (the Warthog jeep looks more like a Puma to Grif) and the fact that vehicle weapons mysteriously have unlimited ammo. The conflict in later seasons turns to the Reds' attempts to get back their robot Lopez, whose body is possessed by the ghosts of

Blue team members Church and Tex at different times in the series. Upon being attacked by a evil-AI-possessed Doc, and realizing that Red and Blue are on the same side, the two teams join together to stop the medic and rescue the kidnapped Lopez. While it never loses its comic edge, later episodes intensify both the conflict and relationships both between the Red and Blue teams and within the teams themselves, with characters frequently switching sides as the balance of power between the two shifts.

The production values also increase as the series progresses. The first episode begins with no title screen or anything; it just cuts straight to the action. Episodes 2-7 introduce a crudely done logo with episode numbers. Episode 8 introduces a brief guitar riff for a theme song and starts titling episodes as well. Footage from outside multiplayer mode gets gradually incorporated in, starting with a cut-scene from campaign mode in episode 9, but it isn't as completely seamless as it would be in episode 31, when they wash out footage of an early campaign mode cut-scene to gray to make it a flashback. By Season 3, they're borrowing footage from both from *Halo 2* and *Halo's* prequel, *Marathon 2* (a 1995 Macintosh first-person shooter) and ingeniously turning it on its head (IMDB). Despite the fact that *Marathon 2* supposedly takes place after the *Halo* series, *Red Vs. Blue* utilizes it as prequel material for the show, since the graphics from *Marathon 2* are more primitive. *Red Vs. Blue* is probably the most successful machinima film out there because of its combination of film-making skills, its slightly skewed and unforced sense of humor, and a storyline that makes a twisted sort of sense while simultaneously poking fun at and paying tribute to an incredibly popular video game.

Machinima is the most narrative form of emergent gameplay because the final product created, the specialized video footage of the gameplay, crosses over from being a

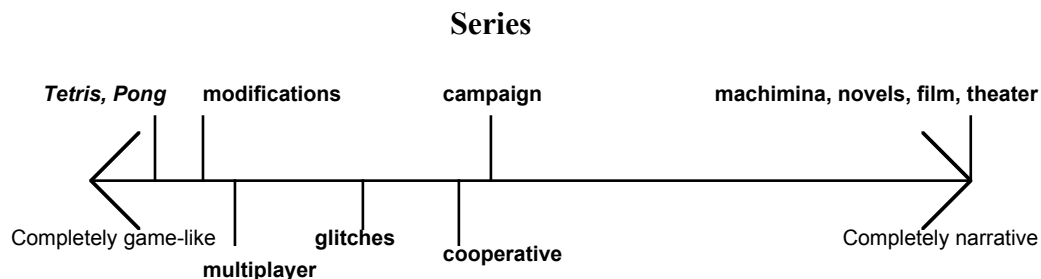
video game to something else entirely. Creating machinima completely removes the interactivity of the video game; machinima is an entirely narrative form. While the act of creating machinima may be considered experientially and performatively emergent narrative by those who create it and those who watch the game while it is being created, the overwhelmingly majority of those who see a piece of machinima will see it as a non-interactive video file, and *not* a video game. In a way, it resembles the relationship between all theatrical arts and the audiences. The act of playing a role, shooting film, directing the action, and recording a play, television show, or movie may be part of a meta-narrative that is interactive to those involved in it, but the intended product for the audience is, most of the time, non-interactive. Machinima may utilize graphics and sound and thematic material from a video game, but it is no longer that video game.

Situating Emergent and Non-Emergent Gameplay on a Narrative Spectrum

The most narrative and least ludic of the emergent and non-emergent gameplay types in the *Halo* series is machinima, since it is all narrative and no gameplay. The next most narrative gameplay mode is campaign mode, which is more game-like than it is narrative, followed by cooperative mode, which emphasizes gameplay slightly more than campaign mode. Glitch exploration gameplay still falls under Squire's idea of video game narrative as an exploration of game space (as well as exploring the game code), but this is a weaker form of narrative than that presented by the normal game, and many gamers explore mainly to showcase their gameplaying skills. Multiplayer mode presents a general meta-narrative of war, and the events of multiplayer sessions can potentially be retold as stories, but there is little else in multiplayer mode that presents a coherent story. The least narrative and most ludic of the intended and unintended gameplay modes in the

Halo series is unintended modification. While some modifications could potentially become more narrative, those modifications are more likely to result in a new game. Most *Halo* modifications are meant to expand the gameplay possibilities or improve a player's skills, purely ludic changes that have little to no effect on the base narrative.

Rough Graphic of Spectrum of Narrative and Game-like Modes of the *Halo*



Conclusion

Utilizing a hybrid approach to video game analysis that includes ludology, narratology, and emergent and intended gameplay modes can be tricky. It will require theorists to realize the strengths and limits of the ludological and narratological approaches to video game analysis, and combine the best parts of these theories in their analyses. It will also force researchers to more closely analyze more aspects of video games as well as keep their eyes open for unintended gameplay options that might emerge as they play. It will necessitate the development of new analytic tools to further research and explain the ludic and narrative effects of each gameplay mode. Hopefully this paper will help call attention to the idea of emergent gameplay and serve as an stimulus for further research and development in the video game studies field.

ⁱ Sen. Hilary Clinton and California state assemblyman Leland Yee have both expressed interest in legally restricting the sale of violent and sexual video games to minors.

ⁱⁱ **A Note on Terminology**

One of the problems with studying video games is that, aside from the ludologists, few of the theorists who

study them are studying them exclusively. Therefore, they frequently have different texts in mind when defining what exactly it is they are examining. Terms such as Murray's digital environments and cyberdrama, Meadows' interactive narrative, Aarseth's ergodic literature and cybertext, and Lev Manovich's new media all include media beyond the scope the video games. For ease of discussion, I will be using Mark J.P. Wolf and Bernard Perron's definition of video games (with the full knowledge that their definition mirrors other theorists' concepts as well). Wolf and Perron define video game by four key elements: algorithms, player activity, interface and graphics (Wolf and Perron 14). Graphics are the visual presentation of a game on a display screen, interface is what a game player uses to interact with the game (keyboard, mouse, controller, on-screen elements such as buttons and cursors), player activity is the result of player manipulation of game elements via the interface, and algorithm is what controls the graphics, sound, input/output, and behavior of non-player characters and elements (15-6). This definition leans towards the *ludic* way of examining video games, but it defines video games in such a way that non-video game media are less likely to be included in the set.

ⁱⁱⁱ Although Perron suggests there is a difference between what he calls a "player" and a "gamer," for ease of use in this paper, the two terms will be used interchangeably to describe one who plays a video game.